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## **ABSTRACT**

In a process for ensuring compatibility of components in a production environment, components are defined and relationships between two or more components identified to generate an application component definition. This application component definition forms a blue print of the entire production environment as well as for computers, which host the production environment. From relationships between components, inter-relationships between these identified relationships can also be determined. Permutations of potential operations are used to define dynamic inter-relationships. By validating the integrity of these identified relationships and inter-relationships, which are associated with components represented on the production environment, any changes or modifications to these relationships and inter-relationships can be validated prior to their execution. Therefore, the stability of the production environment can be ensured in the event of a component change or modification.

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